

IN THE CLAIMS

Please amend claims 16, 21, 25-30, 32-34, 39 and 43 to read as follows:

16. An epitaxial growth method of III-V nitrides alloy, comprising:

spreading liquid comprising group III elements and nitrogen on a substrate;

coating the substrate with a thin film comprising group III elements and nitrogen

by spinning at selected rotation speeds; and

growing an III-V nitrides alloy film on the spin-coated film.

21. The epitaxial growth method of claim 16 wherein the spin-coated film is selected

from the group consisting of GaN, AlN, InGaN, and AlGaN.

25. The epitaxial growth method of claim 16 wherein the epitaxial III-V nitrides alloy film is grown by a sequential combination of two or more growth methods selected from the group consisting of metal organic chemical vapor deposition, molecular beam epitaxy, and hydride vapor phase epitaxy.

26. The epitaxial growth method of claim 16 wherein the spin-coated film is formed by more than two spin coatings.

27. The epitaxial growth method of claim 26 wherein the spin-coated film is formed by more than two cycles of spin coating and annealing.

BEST AVAILABLE COPY

28. The epitaxial growth method of claim 26 wherein the composition ratio varies in the spin-coated film.

Append
29. The epitaxial growth method of claim 26 wherein the lattice constant in the spin-coated film is monotonously increased from the substrate to the epitaxial III-V nitrides alloy film.

30. The epitaxial growth method of claim 26 wherein the lattice constant in the spin-coated film is monotonously decreased from the substrate to the epitaxial III-V nitrides alloy film.

32. The epitaxial growth method of claim 31 wherein the substrate is silicon covered by silicon carbide.

33. The epitaxial growth method of claim 30 wherein the substrate is silicon covered by zinc oxide.

AS
34. An epitaxial growth method of III-V nitrides alloy, comprising:
 spreading liquid comprising group III elements and oxygen on a substrate;
 coating the substrate with a thin film comprising metal elements and oxygen by spinning at selected rotation speeds; and
 growing an III-V nitrides alloy film on the spin-coated film.

BEST AVAILABLE COPY

A6 39. The epitaxial growth method of claim 34 wherein the spin-coated film is selected from the group consisting of zinc oxide, magnesium oxide, and aluminum oxide.

A7 43. The epitaxial growth method of claim 34 wherein the epitaxial III-V nitrides alloy film is grown by a sequential combination of two or more growth methods selected from the group consisting of metal organic chemical vapor deposition, molecular beam epitaxy, and hydride vapor phase epitaxy.

SEE APPENDIX FOR CHANGES MADE TO CLAIMS AND SPECIFICATION

Please add the following new claims:

Sub 1 --44. The epitaxial growth method of III-V nitrides of claim 16 further comprising annealing at a temperature of 700°C or more.

45. The epitaxial growth method of III-V nitrides of claim 44 wherein the annealing occurs after the coating and before the growing.

A8 46. The epitaxial growth method of III-V nitrides of claim 45 wherein the annealing occurs in a gas atmosphere, wherein the gas atmosphere comprises a gas, wherein the gas comprises nitrogen as an element.

47. The epitaxial growth method of III-V nitrides of claim 44 wherein the annealing occurs in a gas atmosphere, wherein the gas atmosphere comprises a gas, wherein the gas comprises nitrogen as an element.